

## **REMARKS/ARGUMENTS**

Amendments were made to the specification to correct errors and to clarify the specification. No new matter has been added by any of the amendments to the specification.

Claims 1-23 are pending in the present application. With this amendment, claims 1-2, 4, 7-8, 11, 14-15, 18, and 22-23 have been amended. Reconsideration of the claims is respectfully requested.

### **I. 35 U.S.C. § 101**

The Examiner has rejected claims 22 and 23 under 35 U.S.C. § 101 as being directed towards non-statutory subject matter.

The Examiner stated that claims 22 and 23 refer to a computer readable medium which has been defined in the specification to include transmission type media which are signals. Signals are regarded as non-statutory subject matter per se. Appropriate correction is required.

Applicants have amended claims 22 and 23 to recite a computer program product, stored in a computer readable medium. In addition, Applicants have amended the specification to cancel the description of transmission-type media.

Applicants believe the rejection has been overcome by the amendments to the claims and specification, and should be withdrawn.

### **II. 35 U.S.C. § 102, Anticipation**

#### **II.A. Claims 8, 18 and 23 under 35 U.S.C. § 102(b) over *Hinderks et al.***

The Examiner has rejected claims 8, 18 and 23 under 35 U.S.C. § 102(b) as being anticipated by *Hinderks et al.*, Method and Apparatus for Injection of IP Multicast Content into an ATM DSL Network, U.S. Patent Application Publication No. 20020097728, published July 25, 2002 (hereinafter "*Hinderks*"). This rejection, as it might be applied to the claims as amended, is respectfully traversed.

The Examiner states: With respect to claim 8, *Hinderks* discloses a method for managing multicast groups in a system area network, the method comprising: receiving a leave request from a second node for leaving a multicast group (para. 10 which details that hosts may also send leave requests), wherein the multicast group has a first member at a first node connected to a first switch (see fig. 1); determining whether a single node remains in the multicast group (see para. 10 which details that the router knows how many nodes are joined to each group address and knows

when the last node issues its leave request); and if a single node remains in the multicast group, routing the first switch to discard all packets for the multicast group (see para. 10, where the router knows how many nodes remain connected. See para. 9 where the router does not forward packets when no host requests multicast packets.)

Applicants have amended all independent claims to describe an InfiniBand system area network, and a Subnet Administration in a first InfiniBand node included in the InfiniBand system area network. Support for these amendments can be found in the specification on page 1, lines 13-18, which describes the InfiniBand standard being incorporated by reference; page 7, lines 15-27; page 8, lines 1-4; and page 9, lines 12-21.

In addition, Applicants have amended claims 8, 18, and 23 to describe a Subnet Administration in a first InfiniBand node receiving a leave request from a second node for leaving a multicast group, wherein the multicast group has a first member at a third node connected to a first switch, and wherein the multicast group is identified using an InfiniBand multicast local identifier (MLID). Support for these amendments can be found in the specification on page 1, lines 24-30.

*Hinderks* teaches injecting IP multicast content into an ATM DSL network. *Hinderks* teaches a DSL network, but does not teach an InfiniBand system area network. *Hinderks* also does not teach a multicast group that is identified using an InfiniBand multicast local identifier (MLID).

Because *Hinderks* does not teach an InfiniBand system area network, *Hinderks* also does not teach a Subnet Administration in a first InfiniBand node receiving a leave request from a second node for leaving a multicast group, wherein the multicast group has a first member at a third node connected to a first switch, and wherein the multicast group is identified using an InfiniBand multicast local identifier (MLID); determining whether a single node remains in the multicast group; and if a single node remains in the multicast group, routing the first switch to discard all packets for the multicast group in an InfiniBand system area network. Therefore, *Hinderks* does not anticipate Applicants' claims 8, 18, and 23.

## **II.B. Claims 8, 10-13, 18-20 and 23 under 35 U.S.C. § 102(b) over *Haggerty et al.***

The Examiner has rejected claims 8, 10-13, 18-20, and 23 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,331,983 issued to *Haggerty*. This rejection, as it might be applied to the claims as amended, is respectfully traversed.

As discussed above, independent claims 8, 18, and 23 describe an InfiniBand system area network, and a Subnet Administration in a first InfiniBand node included in the InfiniBand system area network.

*Haggerty* teaches multicast switching. *Haggerty* does not teach an InfiniBand system area network, or a Subnet Administration in a first InfiniBand node included in the InfiniBand system area network. Because *Haggerty* does not teach an InfiniBand system area network or a Subnet Administration in a first InfiniBand node, *Haggerty* does not anticipate Applicants' claims.

Because *Haggerty* does not teach an InfiniBand system area network or a Subnet Administration in a first InfiniBand node, *Haggerty* also does not teach a Subnet Administration in a first InfiniBand node receiving a leave request from a second node for leaving a multicast group, wherein the multicast group has a first member at a third node connected to a first switch, and wherein the multicast group is identified using an InfiniBand multicast local identifier (MLID); determining whether a single node remains in the multicast group; and if a single node remains in the multicast group, routing the first switch to discard all packets for the multicast group in an InfiniBand system area network. Therefore, *Haggerty* does not anticipate Applicants' claims 8, 18, and 23.

Claim 11 recites: The method of claim 10, wherein the multicast routing data structure is indexed by the InfiniBand multicast local identifier (MLID). Claim 10 depends from claim 8. *Haggerty* does not teach an InfiniBand multicast local identifier (MLID).

In addition, *Haggerty* does not teach routing the first switch including inserting an entry for the multicast group in a multicast routing data structure in the first switch, wherein the multicast routing data structure is indexed by the InfiniBand multicast local identifier (MLID). *Haggerty* does not describe how its filtering process is accomplished. Because *Haggerty* does not teach an InfiniBand multicast local identifier (MLID) or routing the first switch including inserting an entry for the multicast group in a multicast routing data structure in the first switch, wherein the multicast routing data structure is indexed by the InfiniBand multicast local identifier (MLID), *Haggerty* does not anticipate Applicants' claim 11.

The remaining claims are patentable for the reasons given above.

Therefore, the rejection of claims 8, 18 and 23 under 35 U.S.C. § 102(b) has been overcome.

### III. 35 U.S.C. § 103, Obviousness

The Examiner has rejected claims 1-7, 9, 14-17 and 21-22 under 35 U.S.C. § 103(a) as being unpatentable over *Haggerty* in view of *Satran, et al., Multicast Data Transmission Over a One-Way Broadband Channel*, Patent No. 6/507,586, dated January 14, 2003 (hereinafter *Satran*). This rejection, as it might be applied to the claims as amended, is respectfully traversed.

Applicants' claims 1, 14, and 22 describe similar features. Claim 1 is representative of claims 14 and 22. Claim 1 recites: "A method for managing multicast groups in an InfiniBand system area network, the method comprising: receiving, by a Subnet Administration in a first InfiniBand node, a join request from a second InfiniBand node for joining a multicast group, wherein the second node is connected to a first switch and wherein the join request is a send-without-receive request, and wherein the first InfiniBand node is included within the InfiniBand system area network; determining whether the multicast group exists; and if the multicast group does not exist, creating, by the Subnet Administration, the multicast group and routing the first switch to discard all packets for the multicast group."

Applicants' claims are described within an InfiniBand system area network, and a Subnet Administration in a first InfiniBand node included in the InfiniBand system area network. *Haggerty* does not teach an InfiniBand system area network, or a Subnet Administration in a first InfiniBand node included in the InfiniBand system area network.

The Examiner states that *Haggerty* teaches the features of Applicants' claims but does not teach that the join request is a send-without-receive request. The Examiner relies on *Satran* to cure the deficiencies of *Haggerty*. Because *Satran* does not cure the deficiencies of *Haggerty*, however, the combination of *Haggerty* and *Satran* does not render Applicants' claims obvious.

Neither *Haggerty* nor *Satran* teaches an InfiniBand system area network including receiving, by a Subnet Administration in a first InfiniBand node, a join request from a second InfiniBand node for joining a multicast group, wherein the second node is connected to a first switch and wherein the join request is a send-without-receive request, and wherein the first InfiniBand node is included within the InfiniBand system area network; determining whether the multicast group exists; and if the multicast group does not exist, creating, by the Subnet Administration, the multicast group and routing the first switch to discard all packets for the multicast group. Because the combination of *Haggerty* and *Satran* does not teach an InfiniBand system area network that includes the other features of Applicants' claims, the combination does not render Applicants' claims obvious.

Applicants' claims 4 and 15 describe an InfiniBand multicast local identifier (MLID). Neither *Haggerty* nor *Satran* teaches an InfiniBand multicast local identifier (MLID). Therefore, the combination of *Haggerty* and *Satran* does not render claims 4 and 15 obvious.

Applicants' claim 9 depends from independent claim 8. Claim 8 recites a method in an InfiniBand system area network. Claim 9 recites wherein the first member is a send-without-receive member. The Examiner states that *Haggerty* discloses the method of claim 8 but does not teach that the first member may be a send-without-receive member, and relies on *Satran* to cure the deficiencies of *Haggerty*. Because neither *Haggerty* nor *Satran* teaches an InfiniBand system area network, the combination of *Haggerty* and *Satran* does not render Applicants' claim 9 obvious.

Therefore, the rejection of claims 1-7, 9, 14-17 and 21-22 under 35 U.S.C. § 103(a) has been overcome.

#### IV. Conclusion

It is respectfully urged that the subject application is patentable over *Hinderks*, *Haggerty*, and *Satran*, and is now in condition for allowance.

The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

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